DEVELOPMENTAL DISTURBANCES OF JAWS AND SOFT TISSUES OF ORAL & PARAORAL STUCTURES

- Congenital- present at or before birth but not necessarily inherited.

- Hereditary- apparent at birth but some may not become evident for years - transmitted through genes.

- Cell consists of cytoplasm and nucleus
- Nucleus of each cell contains 23 pairs of chromosomes – 1 pair of sex chromosomes and 22 autosomes.

- A chromosome is a nuclear structure composed of DNA - contains unit of hereditary genes.

- Locus is the site occupied by the gene on chromosome.
- An allele is different form of gene at the same locus
- If both the copies of the genes at a given site are identical it is called as homozygous, if different – heterozygous.
- A gene showing trait in heterozygous is considered as dominant.
- Genes are transmitted from one generation to another.

NEURAL CREST CELLS

FATHER OF ALL
CRANIOFACIAL
DEVELOPMENT

FUNCTIONS OF NCC

1. Capacity to migrate & differentiate within the embryo
2. Undergo epithelial-mesenchymal transformation
3. Differentiate to form most of the connective tissue of the head
4. Proper migration of the NCC is essential for the development of face and teeth

- Genotype

Genetic composition

- Phenotype

Combination of genes & environmental influences

- Anomaly – different from normal

1. Combination of genes
2. Environment
3. Folic acid deficiency
4. Teratogens

Chemicals & drug exposure

Retinoic acid, Radiation exposure

Developmental anomalies: Malformations or defects resulting from disturbance of growth and development are known as *developmental anomalies.*

Congenital anomalies: The defects, which are present at birth or before birth during the intrauterine life, are known as *congenital anomalies*.

Hereditary developmental anomalies: When certain defects are inherited by offspring from either of his parents, it is called *hereditary anomaly*. They are always transmitted through genes

- **Acquired anomalies:** Acquired anomalies develop during intrauterine life or after that, due to some pathological environmental conditions. They are not transmitted through genes.

- **Idiopathic Anomalies:** Developmental abnormalities of unknown cause are called *idiopathic anomalies*.

CONTENTS

JAWS

LIPS & PALATE

ORAL MUCOSA

GINGIVA

TONGUE

LYMPHOID TISSUE

SALIVARY GLAND

Soft tissues

JAWS

- AGNATHIA
- MICROGNATHIA
- MACROGNATHIA
- FACIAL HEMIHYPERTROPHY
- FACIAL HEMIATROPHY

Agnathia

It is due to failure of migration of neural crest mesenchyme into the maxillary prominence at the fourth to fifth week of gestation (post conception).

Agnathia

-Hypoplasia or absence of mandible with abnormally positioned ears.

-More commonly, only portion of one jaw is missing.

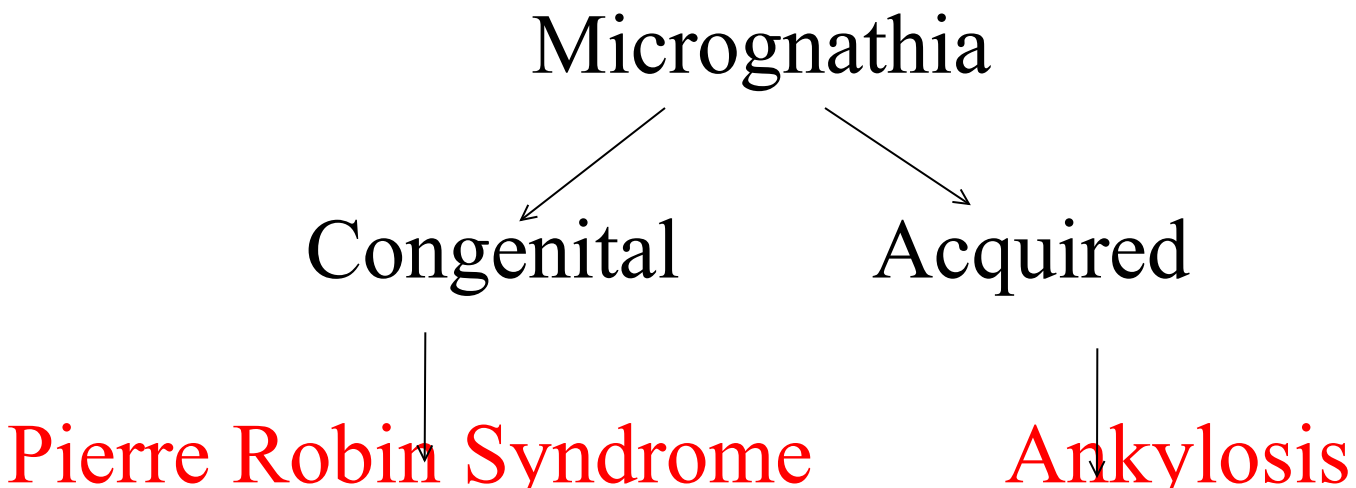
-The entire mandible on one side may be missing.

Micrognathia

- Small jaw – either the maxilla or the mandible may be affected.

- Abnormal positioning or abnormal relationship of one jaw to the other or to the skull produces the illusion of micrognathia.

Micrognathia



Pierre Robin Syndrome

- Micrognathia- bird face
- Cleft palate
- Glossoptosis

Ankylosis

MACROGNATHIA

- It is the condition of abnormally large jaws.
- More commonly jaws are affected, but may be associated with certain other conditions such as:-

Paget's disease

Acromegaly

Leontiasis ossea

Treatment :- ostectomy or resection of a portion of the mandible.

FACIAL HEMIHYPERTROPHY

- Rare developmental anomaly characterized by asymmetric overgrowth of one or more body parts.

- Associated with variety of malformation syndromes.
  Eg:- McCune-Albright syndrome
  Klippel Trenaunay syndrome
  Beckwith Wiedeman syndrome

- The etiology has been ascribed to vascular or lymphatic abnormalities, C.N.S. disturbances and chromosomal abnormalities.

- Most of the times etiology is unknown

CLINICAL FEATURES:-

- Enlargement which is confined to one side of the body.
- Unilateral macroglossia
- Premature development and eruption as well as an increased size of dentition.

ORAL MANIFESTATIONS:-

- The dentition of the hypertrophic side is abnormal in three respects-

1. Crown size
2. Root size and shape
3. Rate of development

- The permanent teeth on the affected side are often enlarged
- The roots are sometimes enlarged on the affected sides.
- The permanent teeth on the affected side develops more rapidly and erupts before their counterparts on the uninvolved side
- The tongue shows unilateral enlargement and contralateral displacement.

FACIAL HEMIATROPHY/ PARRY ROMBERG SYNDROME

- Also called as localised form of scleroderma

- It consists of slowly progressive atrophy of the soft tissues of essentially half of the face, which is characterized by progressive wasting of subcutaneous fat, sometimes accompanied by atrophy of skin, cartilage, bone, muscle.
- It is accompanied usually by contralateral Jacksonian epilepsy, trigeminal neuralgia, changes in the eyes and hair.

Clinical features

- The most common early sign is a painless cleft, the 'coup de sabre' near the midline of the face or forehead.
- Facial wasting
- Wasting of ipsilateral salivary glands and hemiatrophy of the tongue, unilateral involvement of the ear, larynx, oesophagus, diaphragm, kidney and brain have been reported
- Neurologic and ocular disorders

Oral manifestations-

- Incomplete root formation
- Delayed eruption
- Difficulty in mastication
- Hemi atrophy of the tongue and lips

ABNORMALITIES OF DENTAL ARCH RELATIONSHIPS

- CLASS- I - Normal Occlusion
- CLASS- II - Retrognathic Mandible
- CLASS- III - Prognathic Mandible

LIP & PALATE

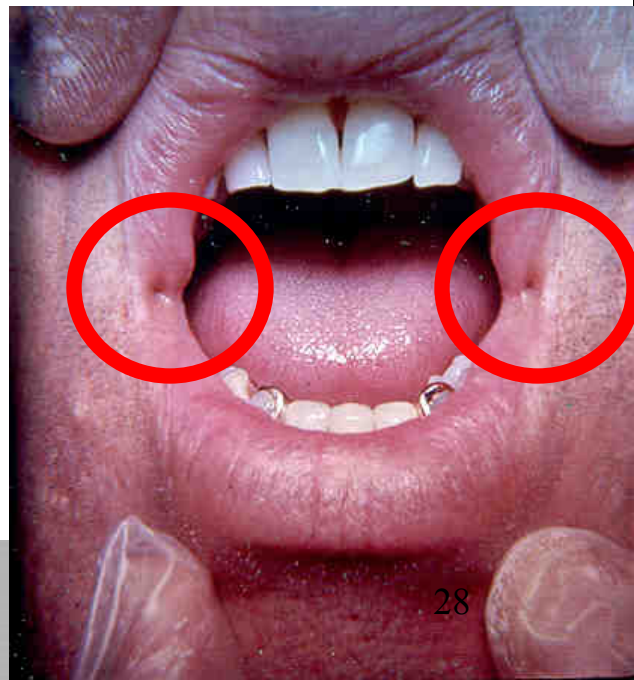
- CONGENITAL LIP & COMMISSURAL PITS & THE FISTULA
- DOUBLE LIP
- CLEFT LIP & PALATE
- CHELITIS GLANDULARIS
- CHELITIS GRANULOMATOSA
- HEREDITARY INTESTINAL POLYPOSIS SYNDROME
- LABIAL & ORAL MELANOTIC MACULE

CONGENITAL LIP & COMMISSURAL PITS & THE FISTULA

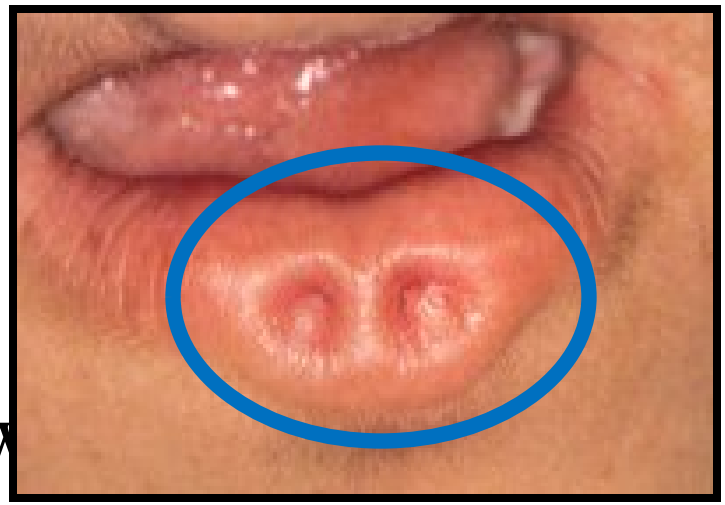
Autosomal dominant trait resulting in developmental defects involving the paramedial portion of the vermilion of the lower and upper lip or the labial commissure area.

Etiology:

- Notching of lip tissue at an early stage
- Failure of complete union of embryonic lateral sulci

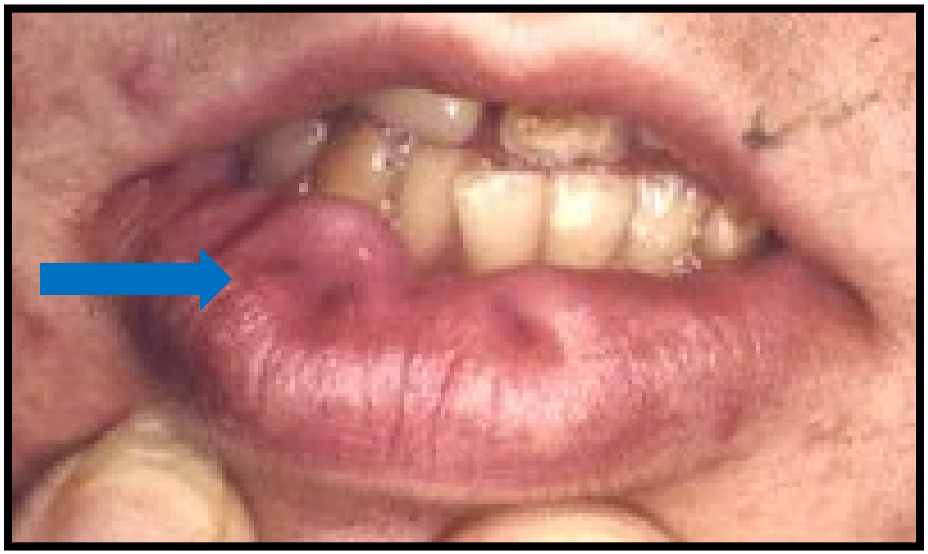


- Rare, bilateral,
- Millimeters from the midline of the vermilion border of the lower lip, bilateral or unilateral depressions
- Size varies from 1-10 mm
- Etiology: hereditary



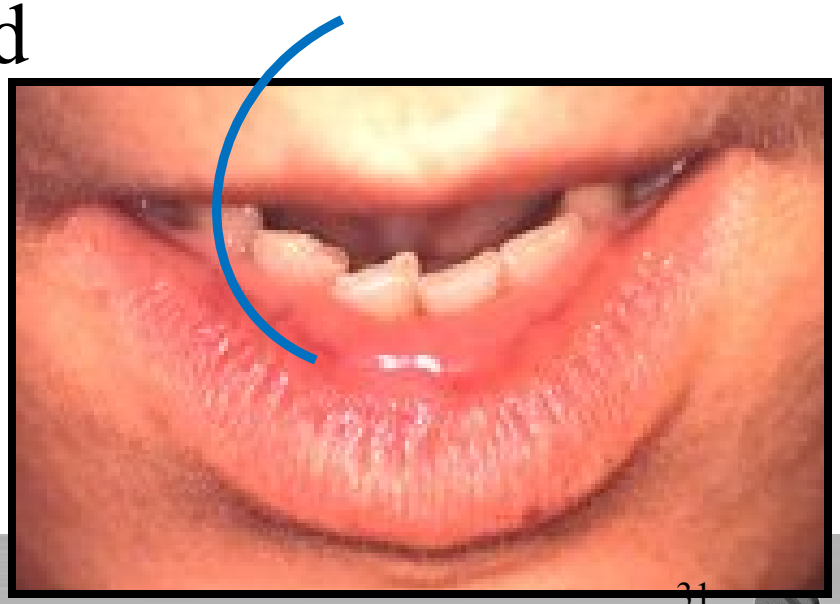
- Associated syndrome: Van der W
- Main Pathologic Process: developmental

- **Treatment:** surgical correction for cosmetic purposes



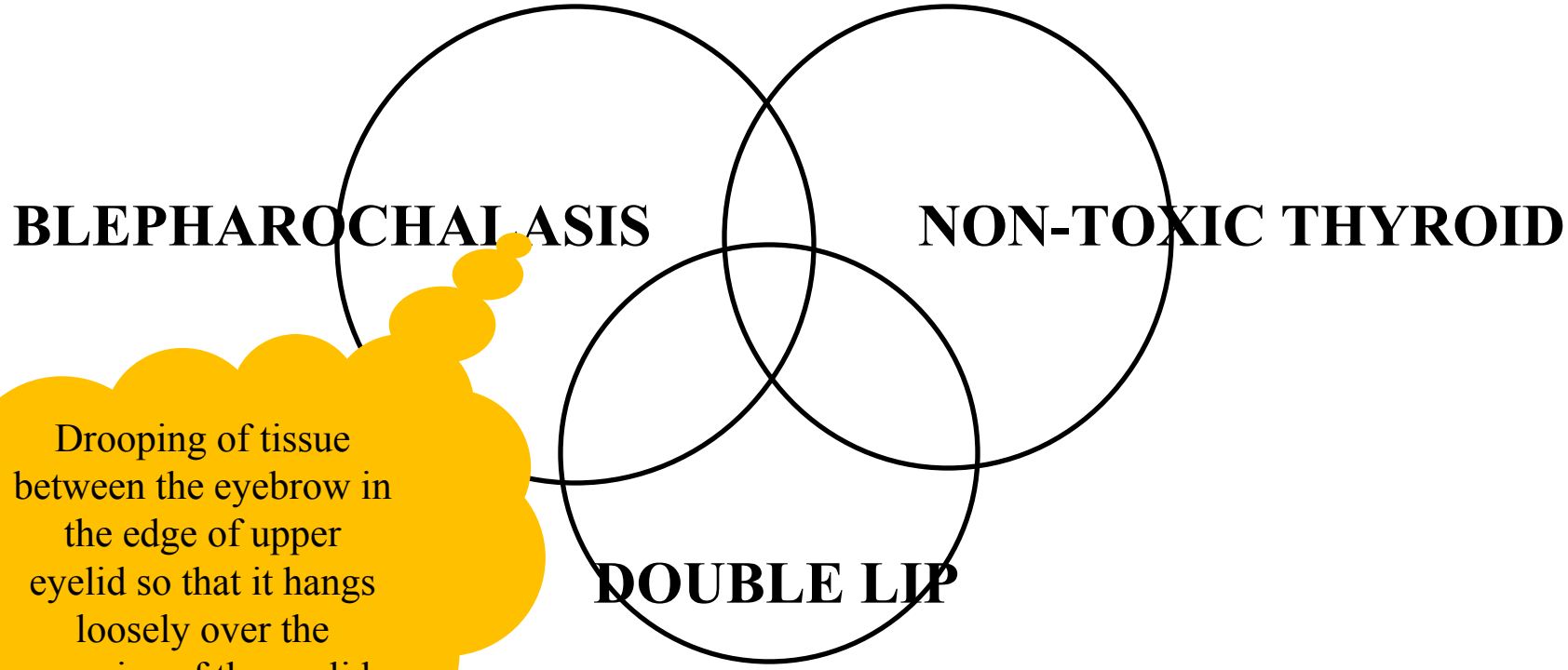
DOUBLE LIP

- Horizontal fold of oral mucosa which is located on the inner aspect of upper lip
- Although lower lip may also be involved
- Can be congenital or acquired



This condition is visible as cupids bow when lip is tensed

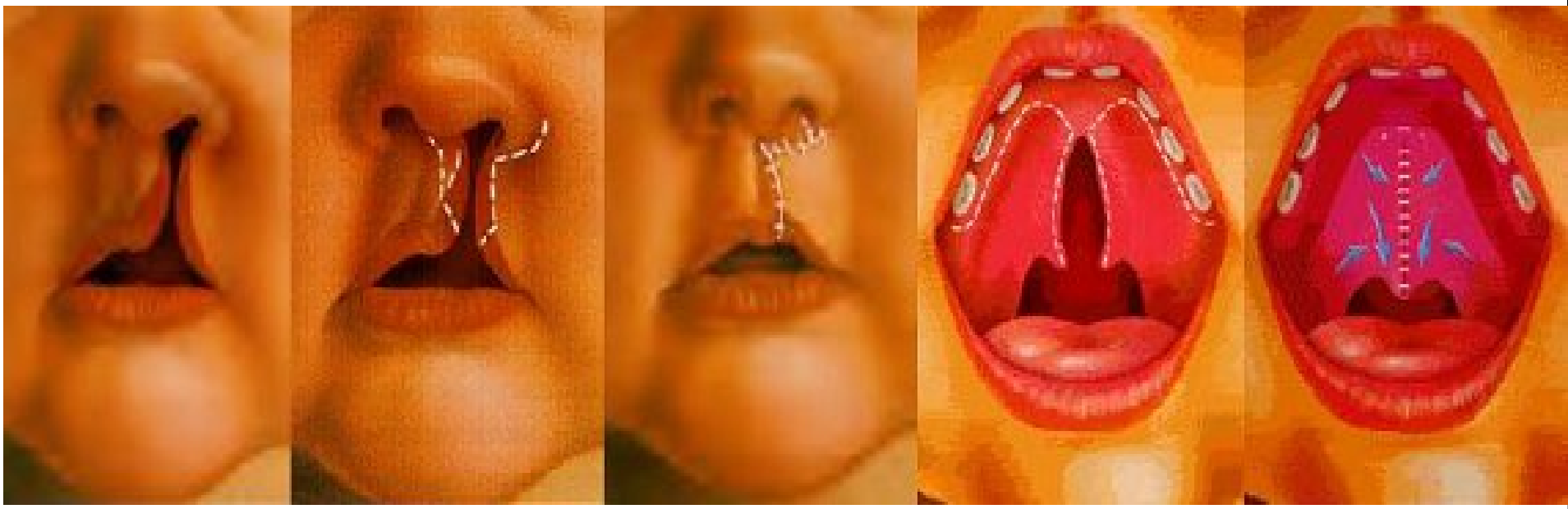
ASCHER'S SYNDROME



Drooping of tissue between the eyebrow in the edge of upper eyelid so that it hangs loosely over the margins of the eyelid

Rx:
COSMETIC REASONS EXCISED

ORAL CLEFTS



- Oral clefts are developmental defects resulting in incomplete fusion of the lateral portions of the lip & or palate

- Considerations- aesthetics, hearing and speech, tooth development, psychological and intellectual development, nutritional status

INCIDENCE

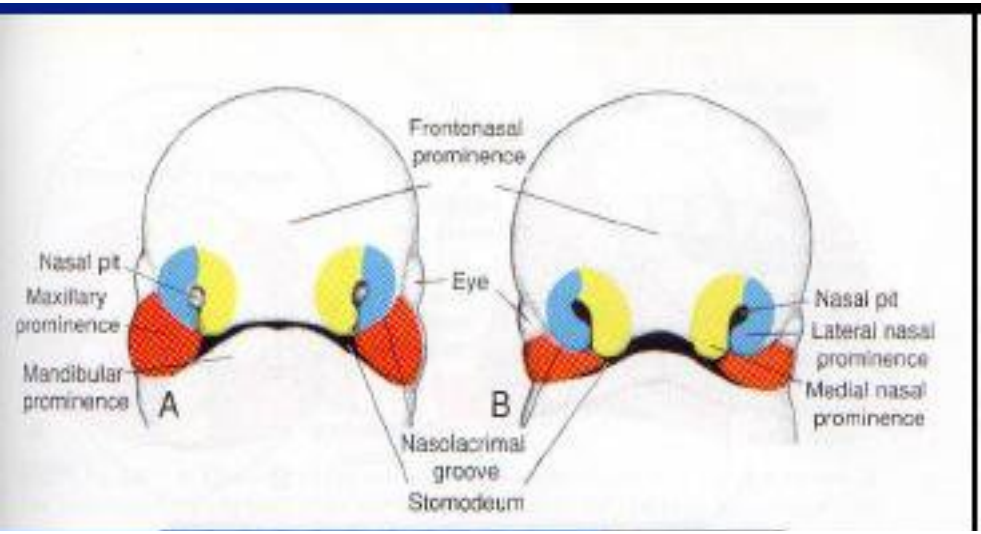
- 1/700- 1/1000 births
- 50% cases are combined, 25% lip, 25% palate

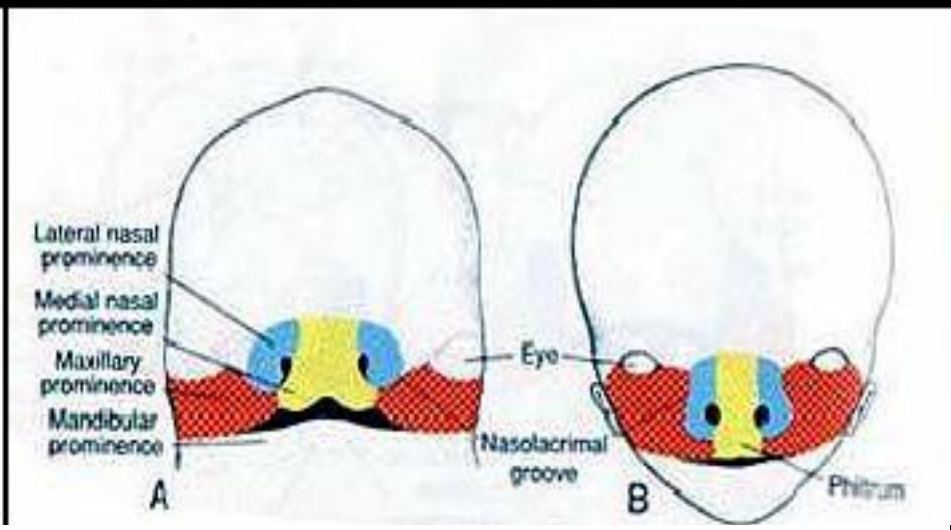
- As per epidemiological studies-

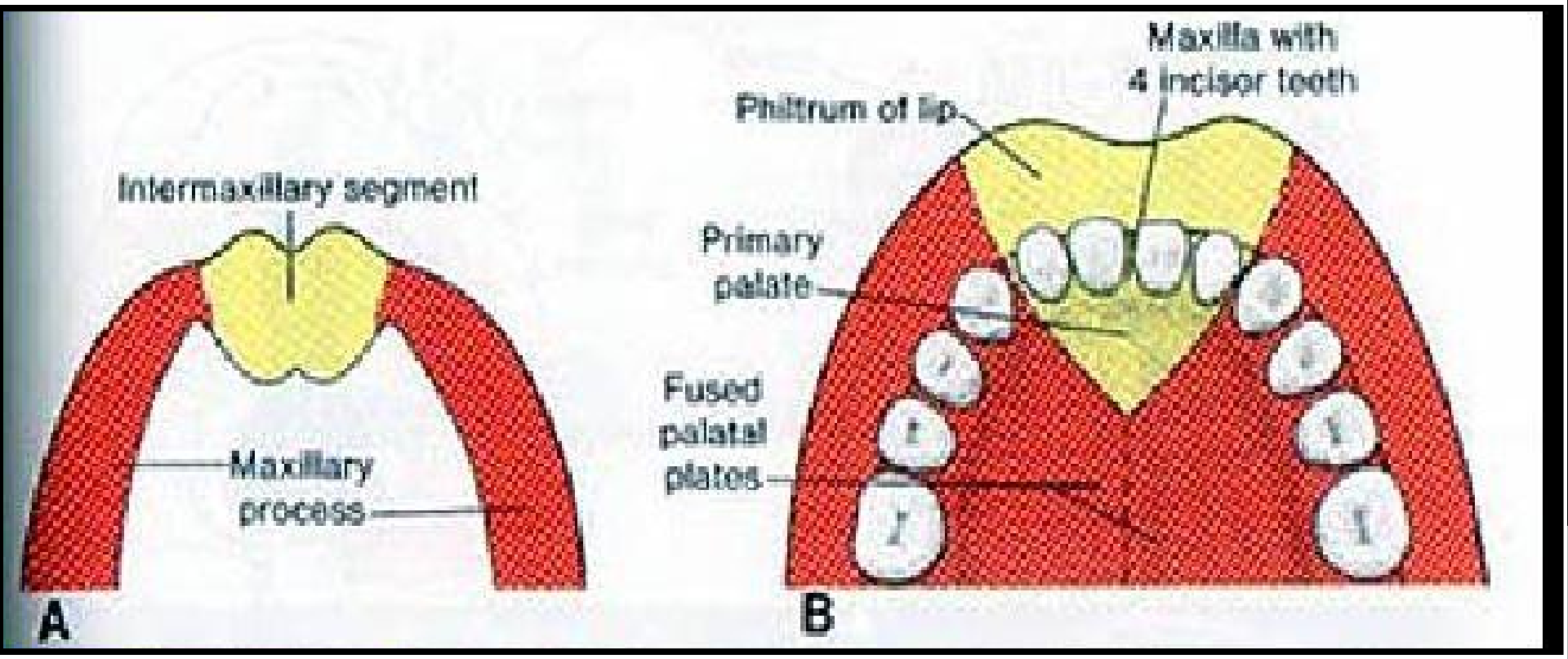
1. Indian males are more commonly affected.
2. Premature babies are most affected.
3. Higher frequencies of occurrence of CL+CP

ETIOLOGY

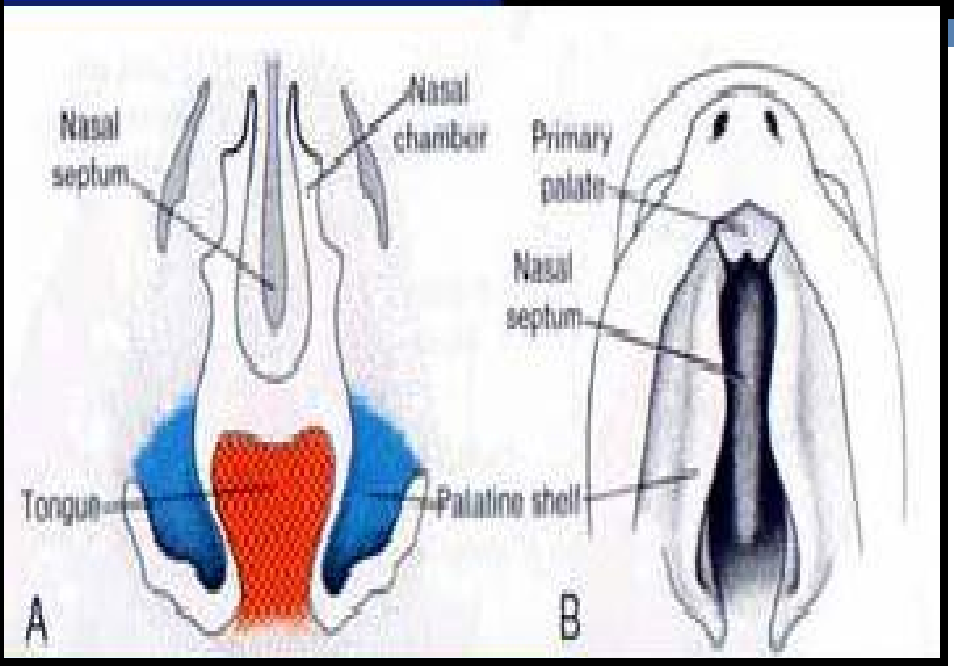
- Multifactorial
- Genetics- heredity
- Environmental factors- teratogens
- Emotional / traumatic stress
- Defective vascular supply
- Relative ischemia to the area
- Hyperglossia /mechanical obstruction
- Lack of inherent force of shelf growth
- Infections
- Circulating substances- alcohol, drugs etc

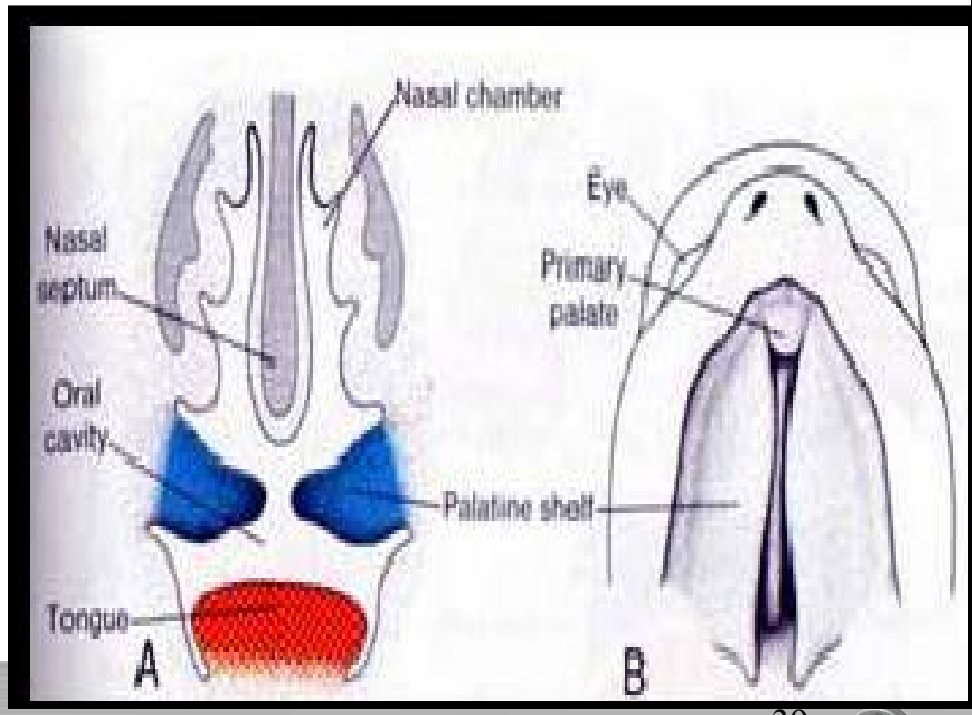

Frontonasal prominence
Nasal pit
Maxillary prominence
Mandibular prominence
A
Eye
B
Nasal pit
Lateral nasal prominence
Medial nasal prominence
Nasolacrimal groove
Stomodeum


Lateral nasal prominence
Medial nasal prominence
Maxillary prominence
Mandibular prominence
A
Eye
Nasolacrimal groove
B
Philtrum

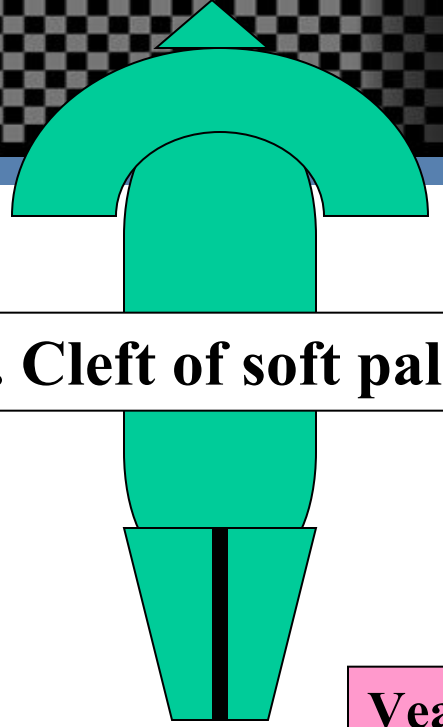

Intermaxillary segment
Maxillary process
A
Philtrum of lip
Maxilla with 4 incisor teeth
Primary palate
Fused palatal plates
B

FUSION OF PALATE

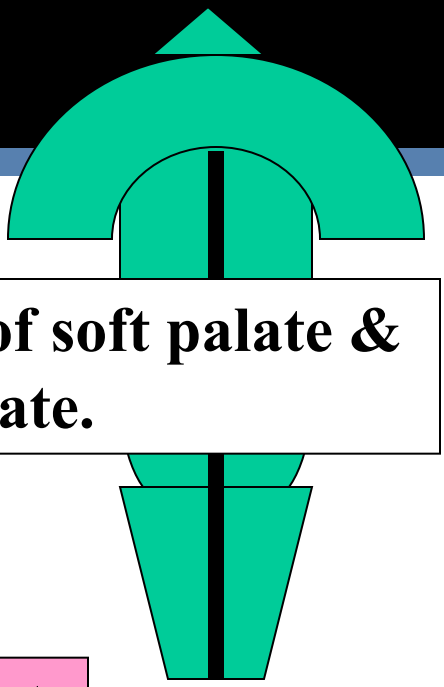




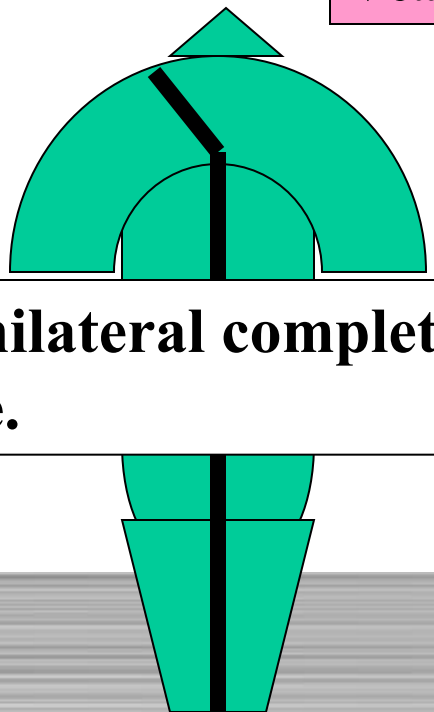
Veau's Classification of Cleft Lip & Palate



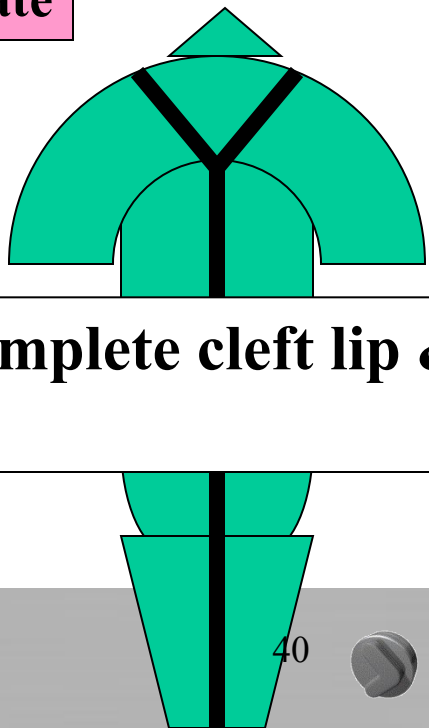
I. Cleft of soft palate only.



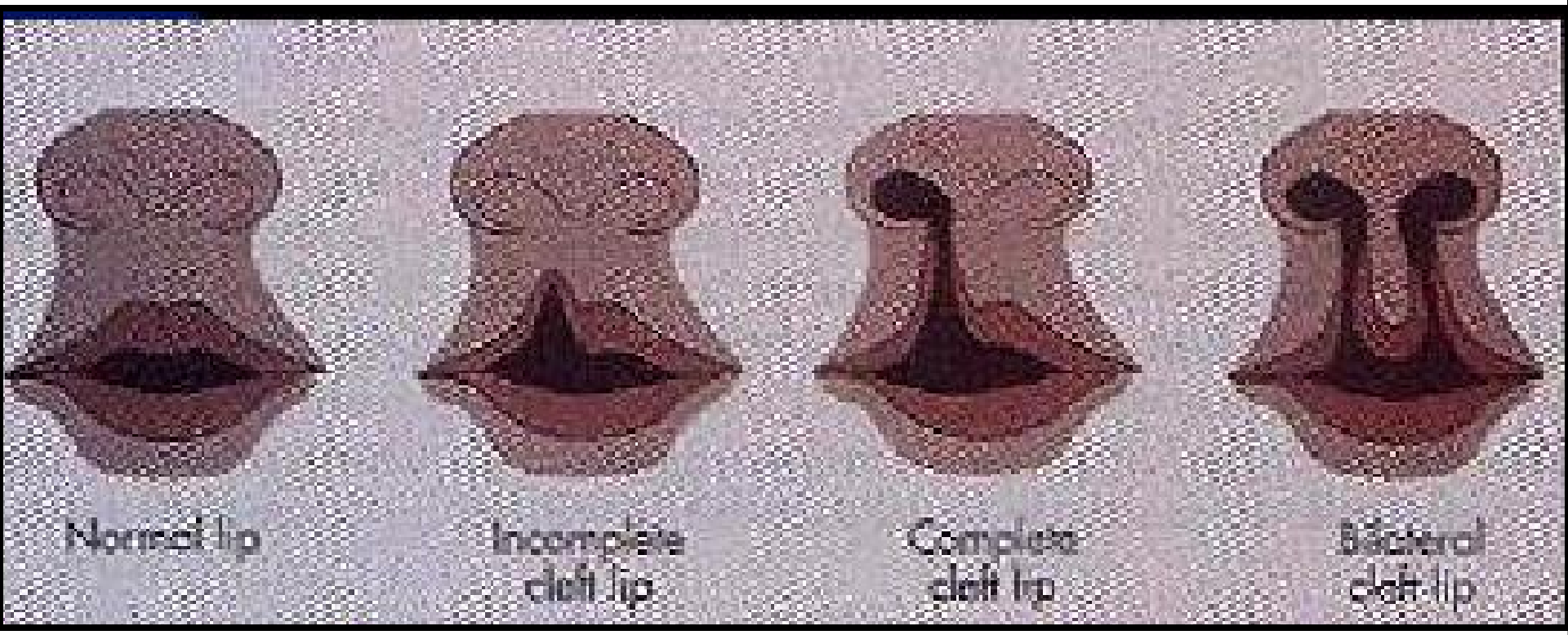
II Cleft of soft palate & hard palate.

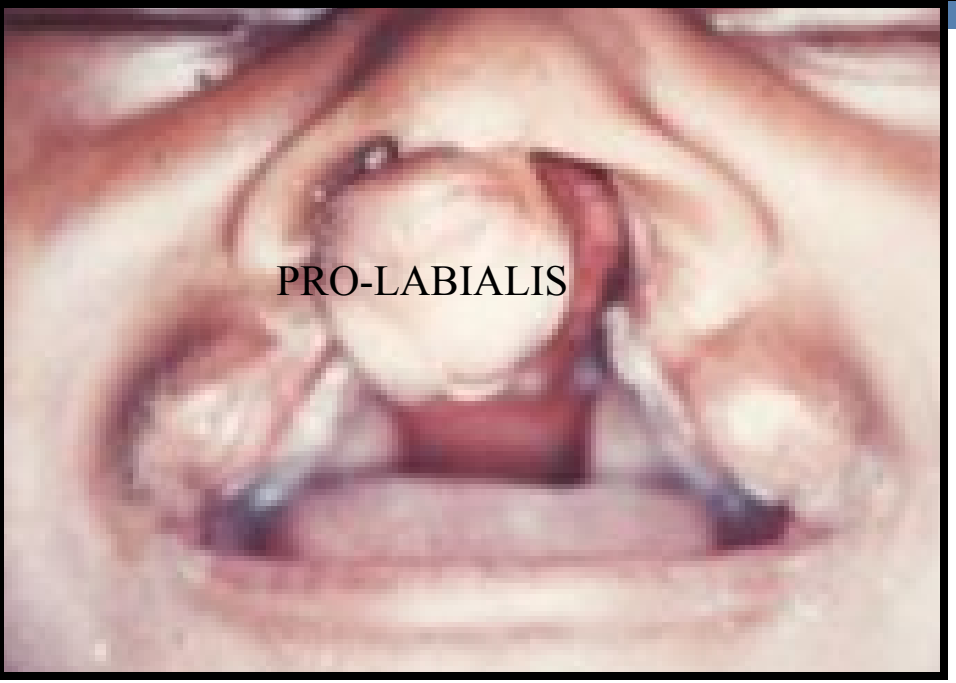


III Unilateral complete cleft lip & palate.



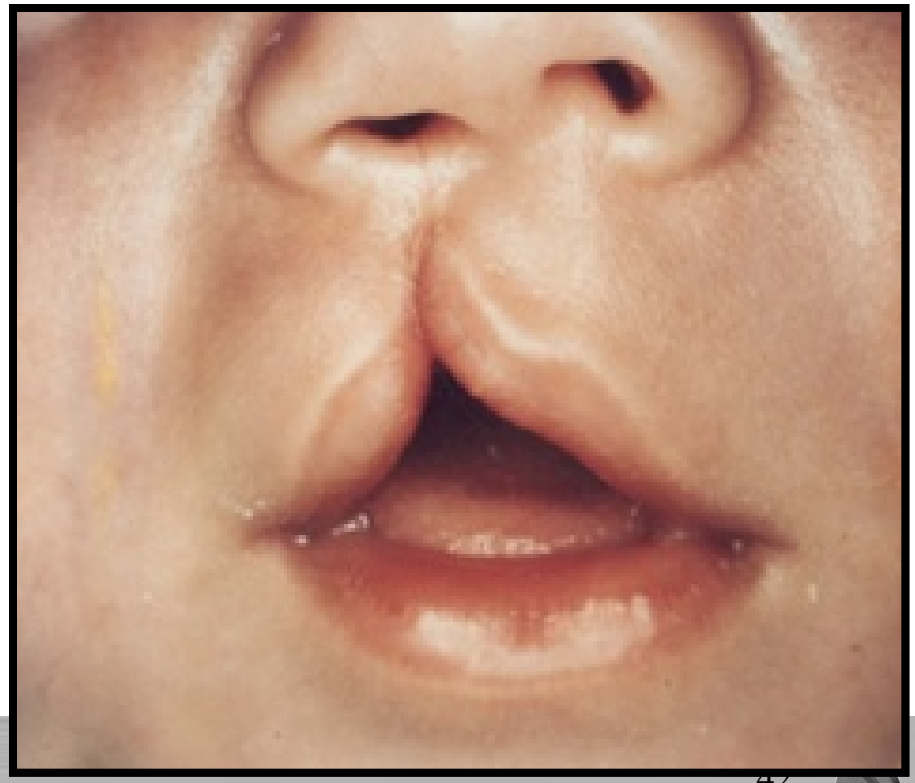
IV Bilateral complete cleft lip & palate.


Normal lip
Incomplete cleft lip
Complete cleft lip
Bilateral cleft lip



Bilateral complete cleft lip & palate.

III Unilateral complete cleft lip & palate.



Clinical significance

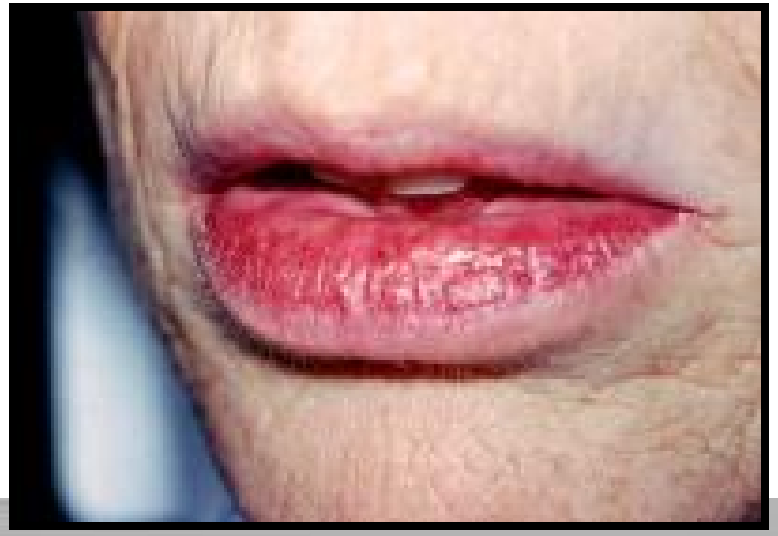
- Mental trauma to the patient and parents
- Difficulty in eating and drinking
- Regurgitation of liquid and food through nose
- Speech problem

Treatment

- Rule of "three 10s" for identifying child's status
- Surgical closure of the cleft lip and palate

CHELITIS GLANDULARIS/ SQUAMOUS CELL CARCINOMA/ACTINIC CHELITIS

Chelitis glandularis is an uncommon developmental anomaly of the lip characterized by chronic enlargement of the labial salivary glands.



Etiology:

1.Chronic exposures to sun wind & dust.

2.Use of tobacco

3.Hereditary

4.Recent etiology: chronic exposure to sun superimposed by bacterial infection.

- Male more than females.
- Middle & Old aged ppl.
- Lower lip more than upper.
- Firm, Inflammatory enlargement of superficial & deep minor salivary glands.
- Lip is often everted due to swelling of the gland.
- Exudates may be expressed from the salivary gland opening.
- **Few cases of Chelitis glandularis may transform into carcinoma of the lip.**

Types:

•***Simple type:*** multiple, painless, pin head size lesions on lip with central depression.

•***Superficial suppurative type:*** painles swelling of the lip with induration and areas of (Baelz's Disease)

•***Deep suppura*** lip with fistula tracts. (Che

Last two entities has highest association with dysplasia and carcinoma

Histopathology:

•Surface epithelium can be either normal or hyperkeratotic.
•The underlying salivary gland tissue shows hypertrophy and inflammation
•Dysplastic changes can be seen in some cases.

Treatment:
Biopsy is mandatory

CHELITIS GRANULOMATOSA
Mischer's Syndrome

Atypical granulomatous disease of the lip, the origin of which is not clearly understood.

Pathogenesis:

1. The exact cause is unknown
2. Regional sarcoidosis
3. Granulomatous lesion of allergic origin
4. Hypersensitivity to bacterial toxins

Clinical Features:

- Young individuals
- Female predominance
- Soft, painless swelling which doesn't pit on pressure
- Enlarged lips often create some cosmetic problems besides that patient may also have difficulty in eating, drinking or speaking.

Histopathology:

Granulomatous inflammation with infiltration by chronic inflammatory cells chiefly lymphocytes, plasma cells and histiocytes.
Generalized edema and dilated blood vessels are present throughout the connective tissue.

Differential diagnosis:

- Sarcoidosis
- Edema and chelitis subsequent to odontogenic infections.

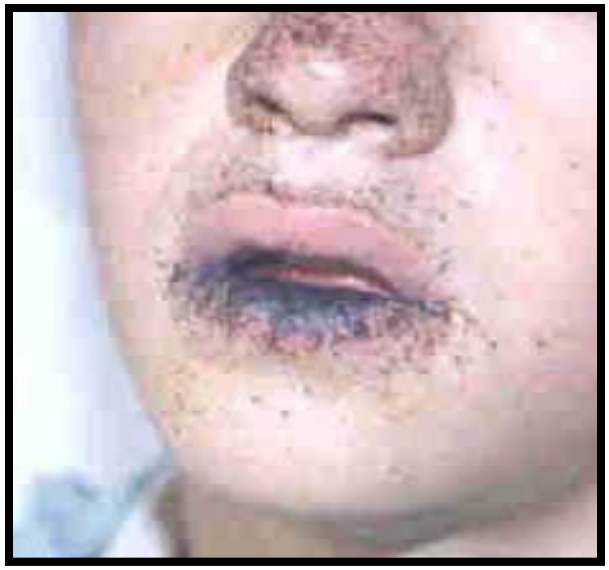
Treatment:

- Intra-lesional injection of steroid: Triamcinolone.
- Surgical excision.

HEREDITARY INTESTINAL POLYPOSIS

Peutz-Jeghers Syndrome:

It is a hereditary condition characterized by mucocutaneous pigmentation & gastrointestinal polyposis.



- The disease is transmitted through autosomal dominant gene.
- There is a germline mutation in STK 11gene.

- It is a developmental condition & the primary disorder is not of melanotic system.

Developmental Disturbances

•Begins at infancy & has no sex predilection.

•There are multifocal melanin pigmentations in the perioral region.

•Macules are discrete, brown to bluish black in color present on the skin, (size varies from 1 to 5 cm in diameter)

•Macules often group around the oral, nasal & orbital orifices.

Orally macules are present on buccal mucosa, followed by palate & gingiva.

- Intestinal polyposis: occurs throughout the intestine but more common in small intestine (jejunum)
- Presence of polyps can cause abdominal pain, rectal bleeding & diarrhea.
- Occasionally intussusceptions & obstruction may cause (even) death.

H/P:

Similar to oral macular lesion

ORAL MELANOTIC MACULE (EPHELIS) FOCAL MELANOSIS

Oral melanotic macule is an idiopathic condition characterized by focal pigmented lesions involving the mucosa.

C/F:

- Small, flat, brown or blackish asymptomatic lesion.
- Mostly lower lip near the midline.
- I/O: gingiva, buccal mucosa.
- Asymptomatic
- Have no malignant potential.

Histopathology:

- Accumulation of melanin granules in the basal keratinocyte.

- Melanocytes are normal and show no atypia.

Differential diagnosis:

- Superficial melanoma
- Blue nevi
- Amalgam tattoo

Rx

- No treatment required
- Biopsy mandatory for definative diagnosis.

ORAL MUCOSA

- LEUKODEMA
- FORDYCES GRANULES
- FOCAL EPITHELIAL HYPERPLASIA

LEUKOEDEMA

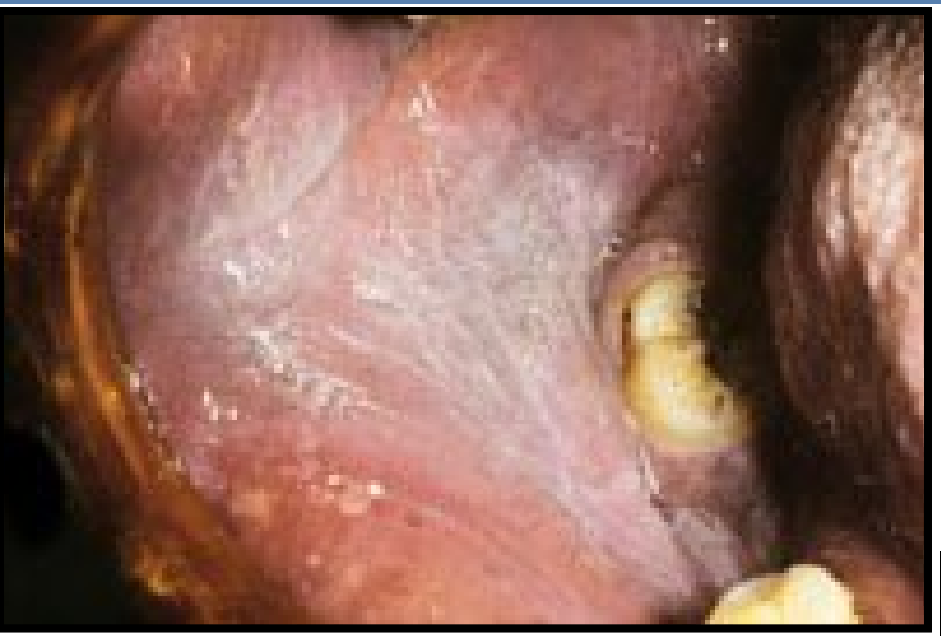
Accumulation of fluid within the epithelial cells (spinous cell layer) of the buccal mucosa.

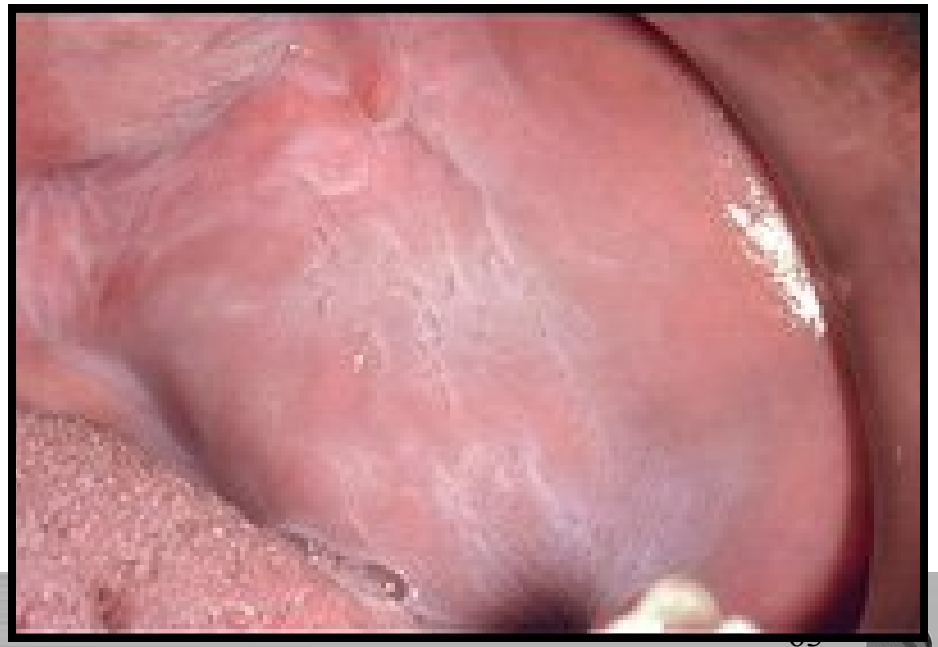
•Clinical features:

•Asymptomatic

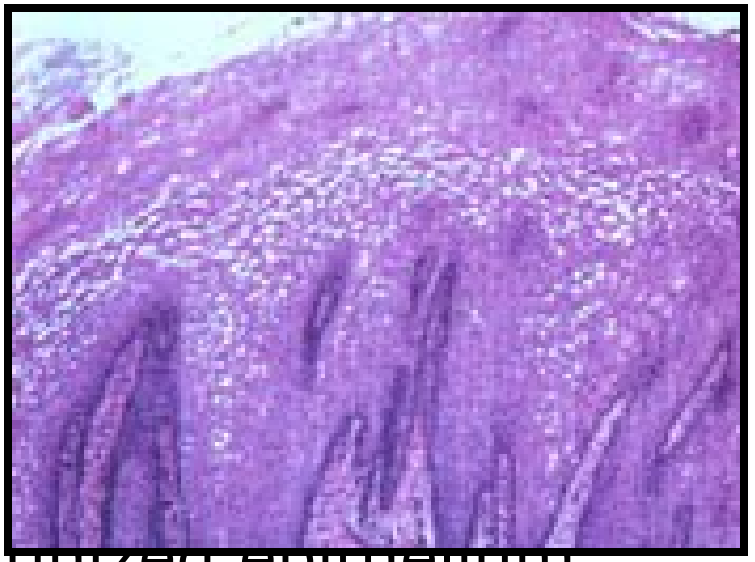
•Bilateral, diffuse, grayish-white, milky, opalescent appearance of the mucosa. Usually on occlusal plane.

•Will disappear when applying the clinical "stretch test"





Tissue of Origin:
mucosal tissue



•**Histologic features:**

•Proliferating epithelium

•Parakeratinized or nonkeratinized epithelium

•Intracellular edema : accumulation of intra cytoplasmic fluid & glycogen.

•Broad, elongated rete ridges

Main pathologic process:

Non-neoplastic benign proliferation

Treatment:

No treatment is required

Prognosis:

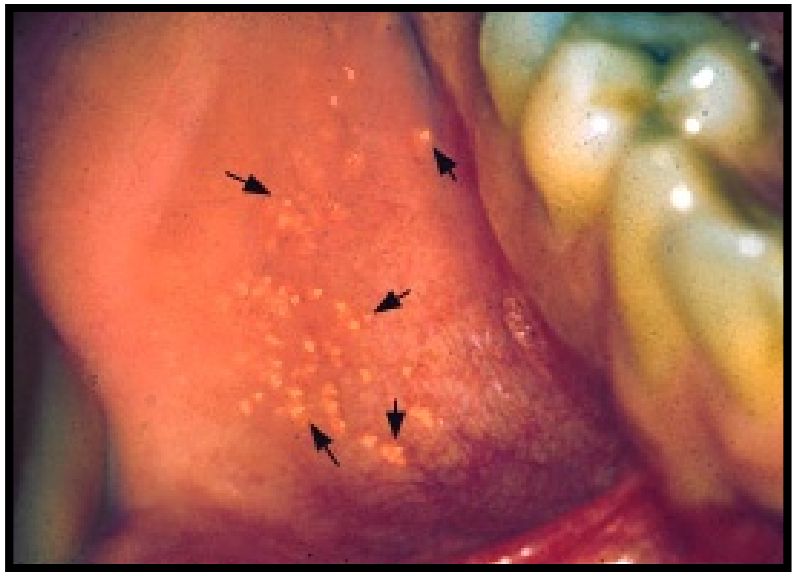
Does not change significantly after 25-30 years of age

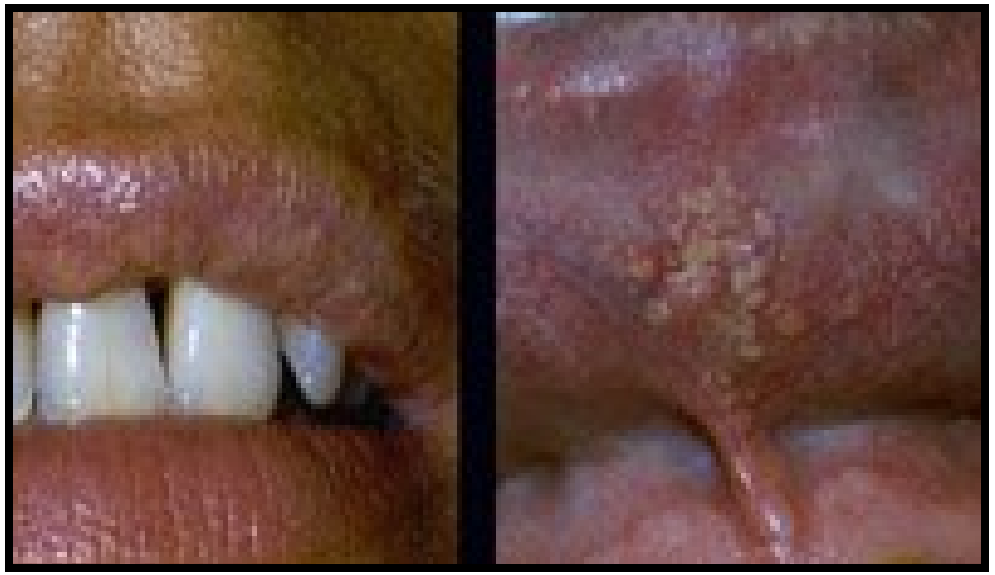
Differential diagnosis:

- Smokeless tobacco keratosis
- Frictional keratosis
- White sponge nevus
- Hereditary benign intraepithelial dyskeratosis

FORDYCE GRANULES (ECTOPIC SEBACEOUS GLAND)

Collection of sebaceous glands that occur in various locations within the oral cavity.





Etiology: developmental variant

Tissue of origin: mucosa

•<u>Clinical Features:</u>

•Multiple small white to yellow, yellowish-white papular/nodular lesions

•1-2 mm in diameter

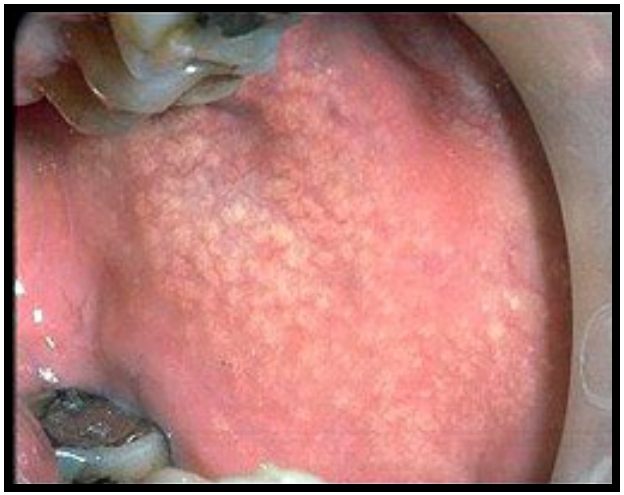
•Most commonly found on the buccal mucosa and vermilion of the upper lip….. Rarely on lower lip

•Commonly bilateral

•Persistent

•Asymptomatic

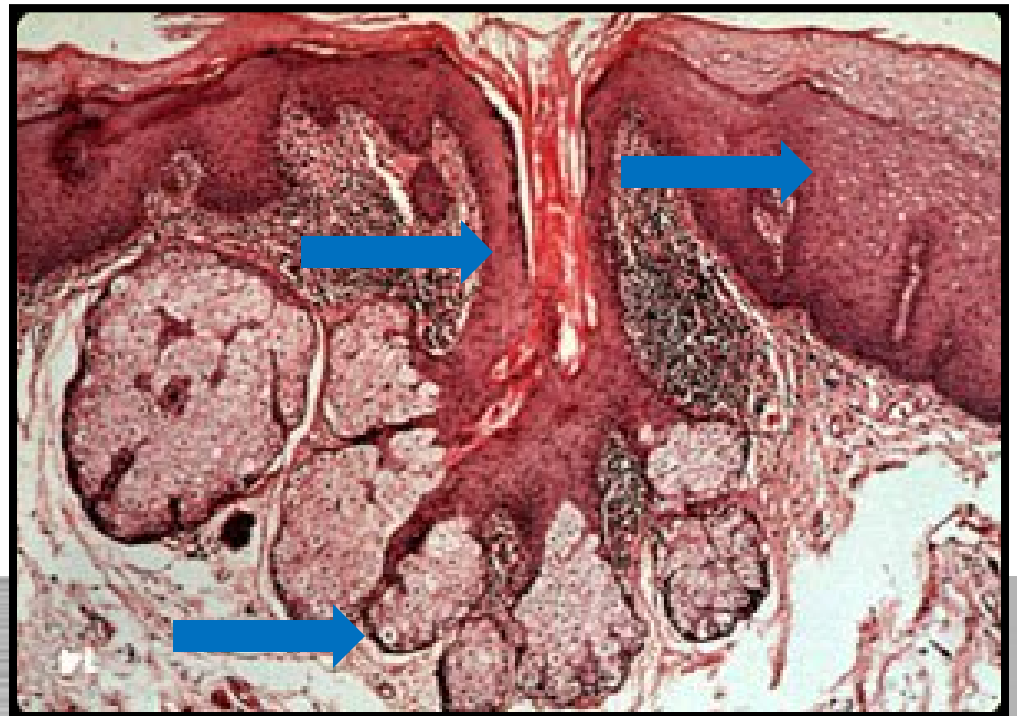
•No sex predilection



Histological Features:

•Presence of sebaceous glands (as found in skin) in submucosal connective tissue, except the fact that not associated with hair.

•These glands are located superficially and are composed 1-5 lobes. Ducts open into mucosa & duct may show keratin plugging.



Main pathologic process: developmental disturbance (misplaced tissue)

Treatment: no treatment is necessary

Prognosis: normal variant; innocuous

Differential diagnosis: leukoplakia
candidiasis

Focal Epithelial Hyperplasia (Heck's Disease)

Multiple papillary or sessile areas of epithelial hyperplasia in the oral mucosa

Etiology & pathogenesis: Unknown

HPV ?

C/f:

- Age: 13-18
- Multiple, small, pedunculated, polypoid or nodular soft tissue growths on the oral cavity.
- Most common site: buccal & labial mucosa.
- Size: 1-5mm
- White or pink color

Histopathology:

•Hyperparakeratosis

•Acanthosis

•Koilocytes: epithelial cells of upper spinous cells show enlarged nuclei & vacuolated clear cytoplasm

•Retepegs: elongation & fusion

•Occasionally focal areas of liquefaction degeneration of basal cell layer

Rx:

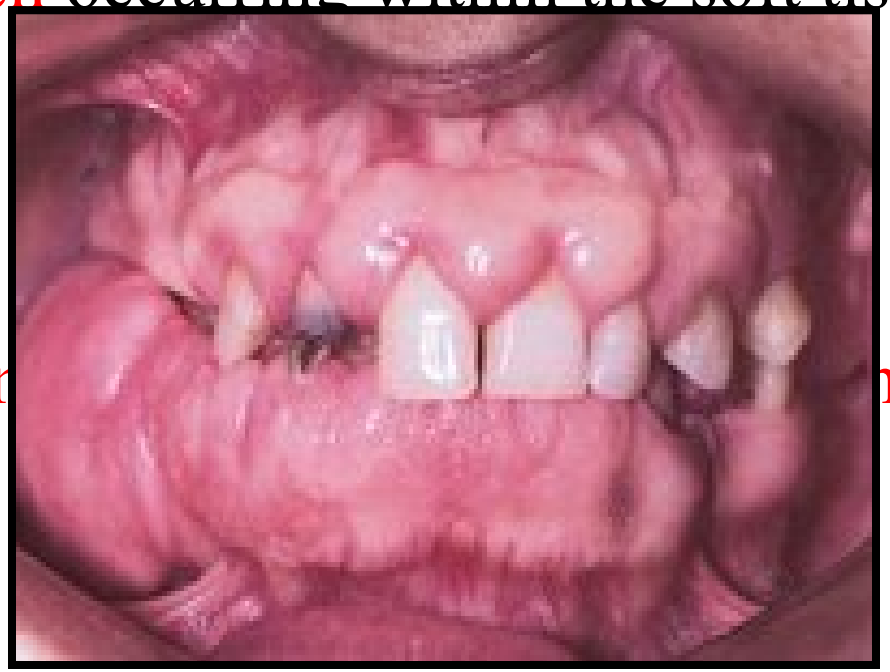
•No Rx- may regress on its own

GINGIVA

- FIBROMATOSIS GINGIVAE
- RETROCUSPID PAPILLAE

GINGIVAL FIBROMATOSIS,FIBROMATOSIS GINGIVA,ELEPHANTIASIS GINGIVAE

Benign diffuse infiltrative proliferation of fibroblasts and mature collagen occurring within the soft tissues of the head and neck



Hereditary cor mal dominant trait

Etiology:

Unknown but hereditary is possible

Clinical Features:

•Generalized, but often irregular enlargement of the facial and lingual aspects of the attached and marginal gingiva

•Age: at birth or can occur in 1st and 2nd decade of life

•No sex predilection

•Painless, slowly progressive completely covering the teeth

Syndromes associated: Cowdens,

Rutherford,

Laband Syndrome.

Main pathologic process: benign proliferation

Tissue of Origin: connective tissue

Histologic features:

•Extreme elongation of rete processes

•Dense or moderately dense, rather vascular, bland collagenic connective tissue with scattered chronic inflammatory cells

•Mature spindle shaped fibroblasts few of which are multinucleated.

Differential diagnosis:

Fibromatosis

Leukemic gingival hyperplasia

Granulomatous gingivitis

Plasma cell gingivitis

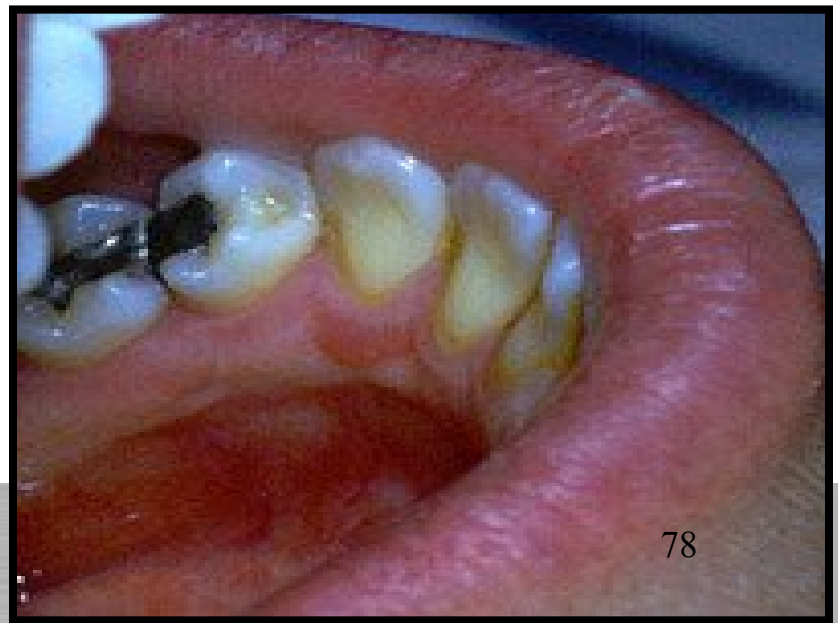
Treatment: gingivectomy ,proper oral hygiene

RETROCUSPID PAPILLA

A sessile nodule on the gingival margin of the lingual aspect of the mandibular cuspids.

Clinical Features:

- 2-4 mm sessile nodule of mandibular alveolar mucosa
- Located on gingival margin lingual to mandibular cuspids
- More common in children
- May be unilateral or bilateral



Etiology:
developmental

Tissue of Origin:
mucosa

Histologic Features:
highly vascular fibrous connective tissue surfaced by ortho or parakeratinized squamous epithelium

Main Pathologic Process:
developmental

Treatment:
no treatment necessary

Prognosis:
normal variant

TONGUE

- AGLOSSIA
- MICROGLOSSIA
- MACROGLOSSIA
- ANKYLOGLOSSIA
- CLEFT TONGUE
- FISSURED TONGUE
- MEDIAN RHOMBOIDAL GLOSSITIS
- BENIGN MIGRATORY GLOSSITIS
- HAIRY TONGUE
- LINGUAL VARICES

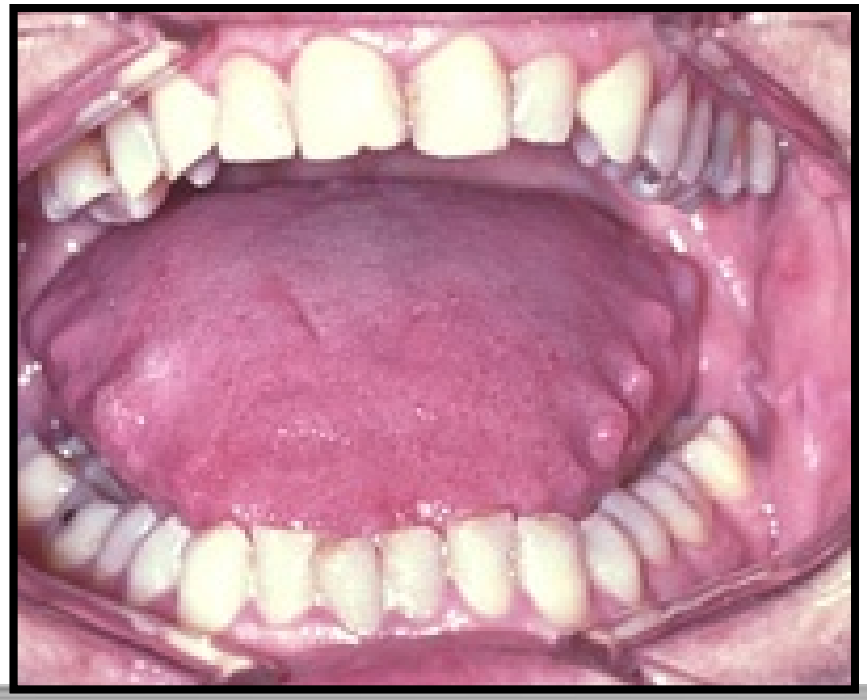
AGLOSSIA

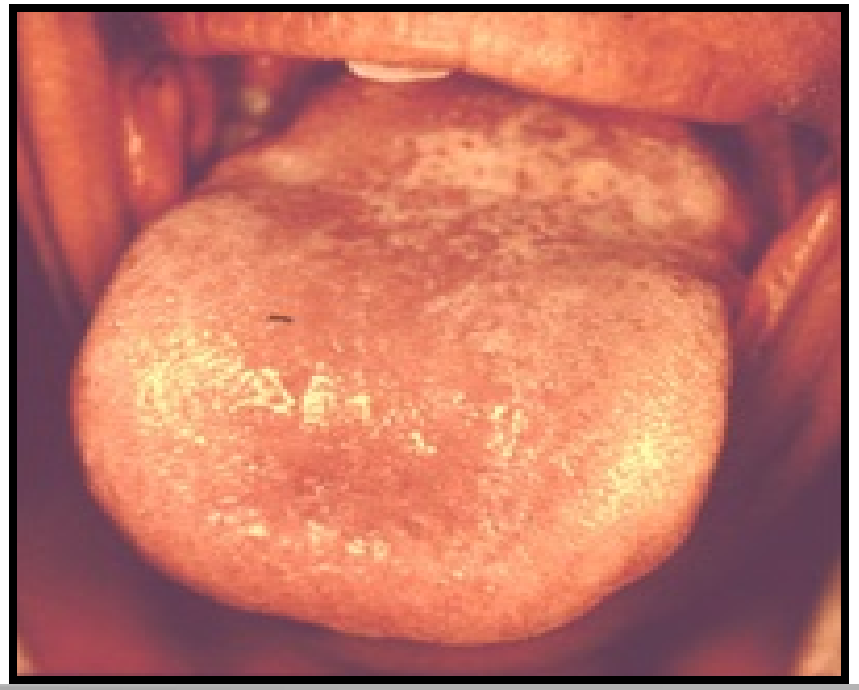
- A congenital disorder where the tongue is absent.
- This condition is usually associated with other serious developmental anomalies.

Congenital Macroglossia

Etiology: Congenital
Secondary

A congenital disorder where the tongue is larger than normal due to an increase in the amount of tissue.





Etiology:

1. Overdevelopment of tongue musculature

2. Syndromes: Beckwith's hypoglycemic syndrome

Down

C/f:

Disturbance of speech, occlusion, cosmetics, scalloping of lateral margins of tongue.

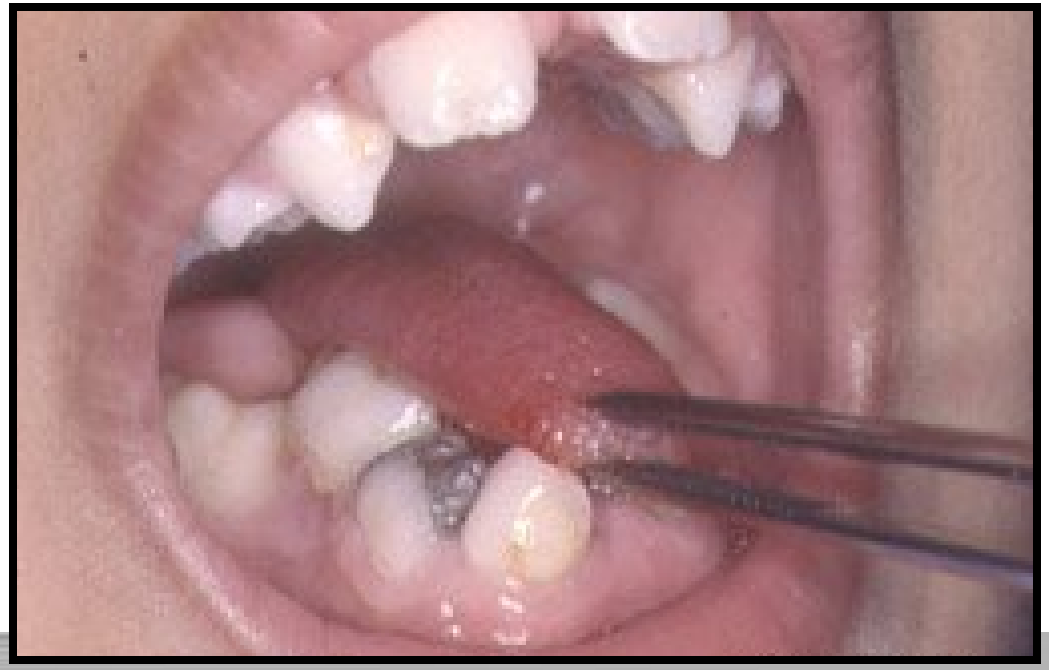
Rx:

Removal of the cause.

Surgical reduction.

MICROGLOSSIA

- Rare
- Speech, food intake difficulty
- Small mandibular arch.

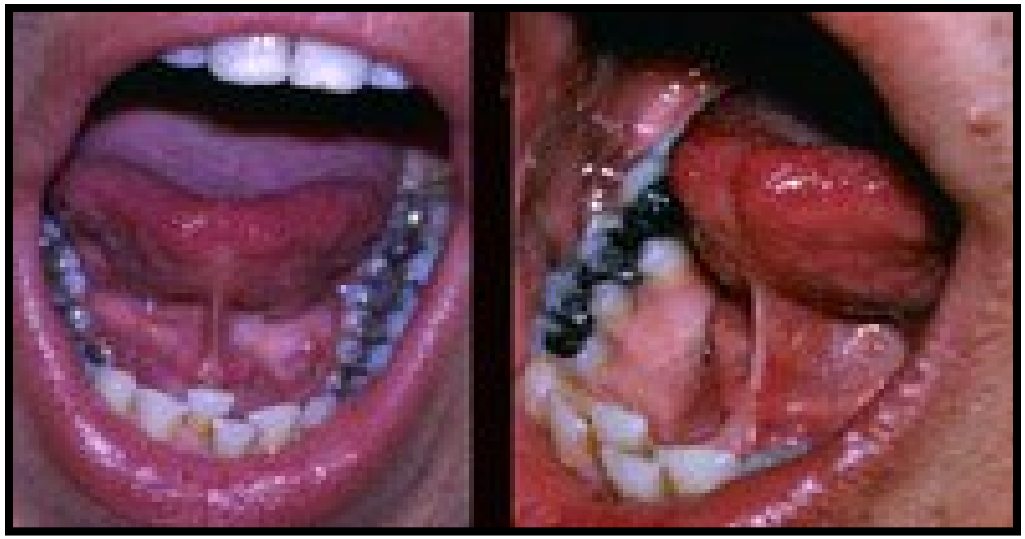


ANKYLOGLOSSIA

Ankyloglossia:

Fixation of tongue to floor of mouth there by reducing the mobility of the tongue.

Fusion of tongue to short lingual frenum or frenum attached too near to the tip of the tongue.



Cleft Tongue

Etiology: failure of 2 lateral swellings to fuse

Complete: (bifid tongue)

Rare

Shows a complete cleft along the long axis of the tongue.

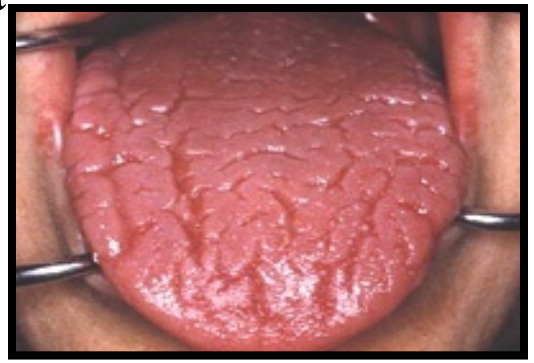
Partial:

Common

Exhibits a deep groove

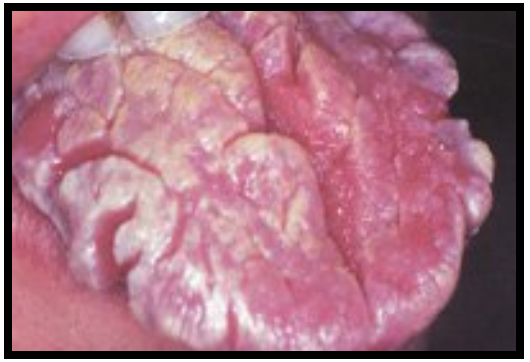
FISSURED TONGUE

Deep grooves in dorsum of tongue which cause no adverse consequences other than being a collection site for food debris and colonization site for Candida albicans.



Fissures often radiate from central groove on the dorsal surface in an oblique direction.

May occur simultaneously or as a sequel to geographic tongue.



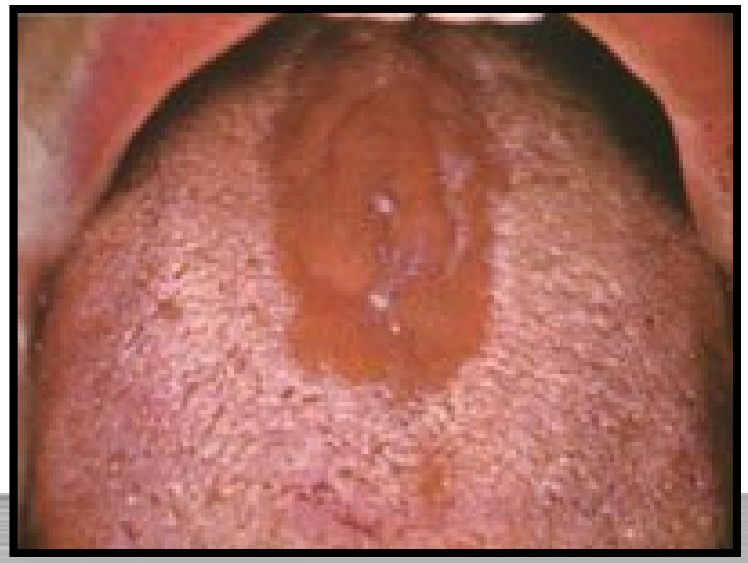
Etiology:

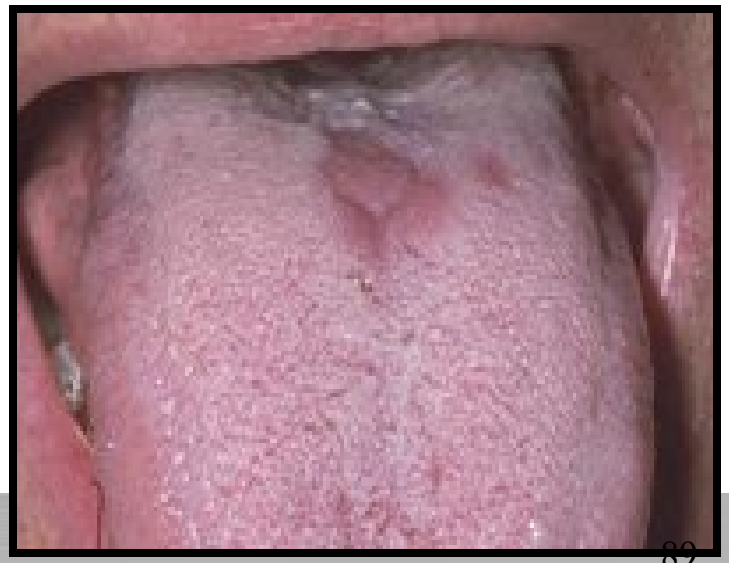
- *C. Albicans* infection

Median Rhomboid Glossitis

An asymptomatic, elongated, erythematous patch of atrophic mucosa of the middorsal surface of the tongue due to a chronic *C. albicans* infection.

Site: anterior to foramen ceacum & the circumvallate papillae in the midline of dorsum of tongue





Clinical Features:

- Dorsal surface of the tongue along the midline, just anterior to the foramen ceacum
- Rhomboid or oval, well-demarcated shape
- Red, flat or slightly multilobulated
- Smooth, depapillated surface
- 1 to 3 cm
- Usually asymptomatic

Differential diagnosis:

Median rhomboid glossitis

- Erythematous candidiasis
- Thyroglossal duct cyst
- Lymphangioma
- Hemangioma
- Leiomyoma

Tissue of origin:
• mucosal tissue

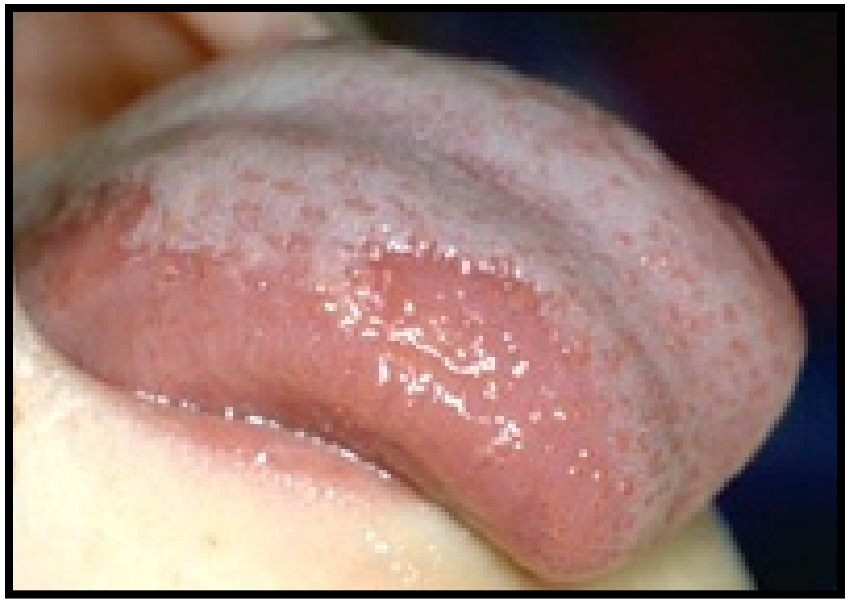
Main pathologic process:
• inflammation

Treatment:
•Topical or systemic antifungal drugs to manage the predisposing factors

BENIGN MIGRATORY GLOSSITIS,GEOGRAPHIC TONGUE, ERYTHEMA MIGRANS,WANDERING RASH OF TONGUE

Multiple sensitive irregularly shaped erythematous patches on the tongue with white rims that enlarge and change shape daily.

Etiology: unknown

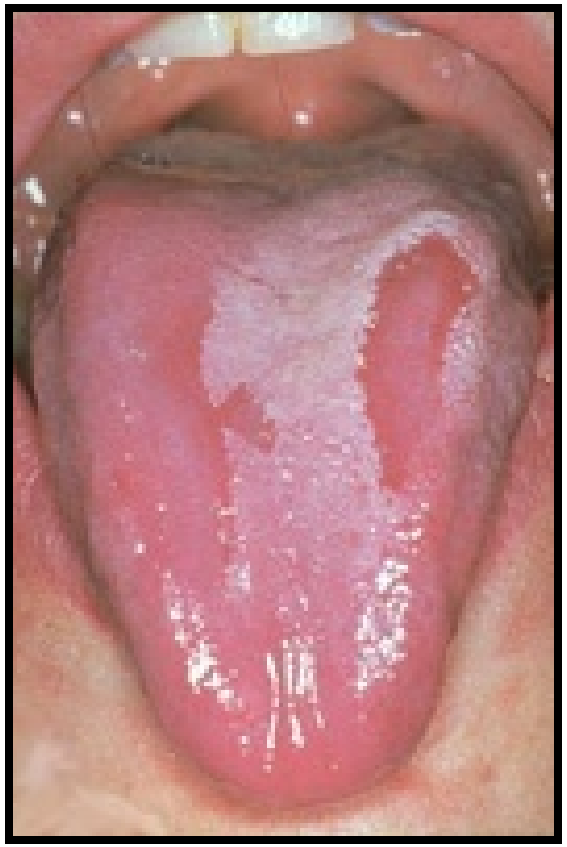


Clinical Features:

•Multiple , well-demarcated zones of erythema due to atropy of the filliform papillae concentrated at the tip and lateral borders of the tongue

•Erythematous areas are rimmed surrounded at least partially by a slightly elevated, yellowish-white, serpentine or scalloped border

•Daily change in size and shape.



Tissue of Origin: epithelium

Histologic Features:

Hyperkearatinzation with loss of fungiform papillae.

Differential diagnosis: Atrophic candidiasis
leukoplakia
geographic tongue

Main Pathologic Process: hyperkeratosis,
inflammation,
atropy of the filliform papillae

Treatment: usually no treatment
corticosteroids > discomfort
avoid brushing tongue

HAIRY TONGUE

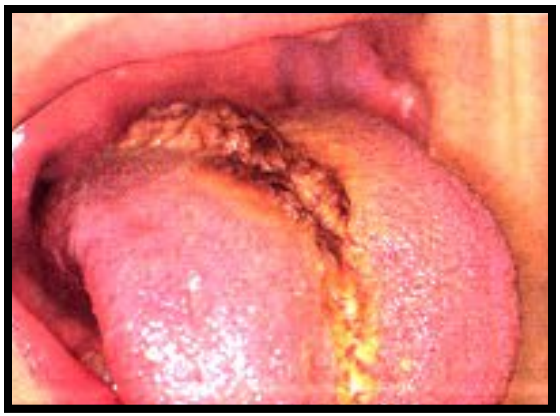
Marked accumulation of keratin on the filliform papillae of the dorsum of the tongue, resulting in hairy appearance and discoloration of the tongue thought to denote a change in the body's natural bacterial balance.

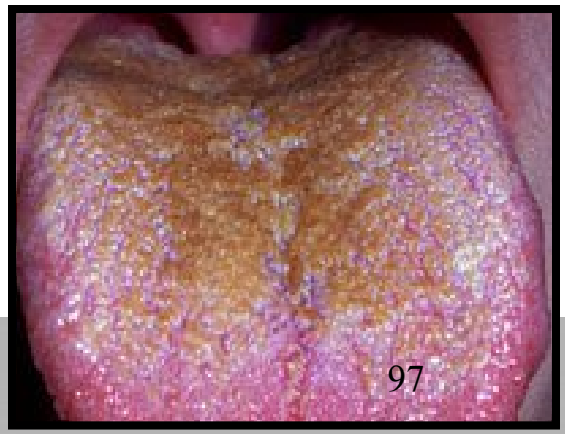
Clinical Features:

• Black, brown or yellow "hairs" covering tongue dorsum along the midline, thick matted appearance

•Usually asymptomatic

•Occasional gagging sensation or bad taste in the mouth





Etiology unknown
Tissue of Origin: epithelium

Histologic features:
Elongation and hyperparakeratosis of filiform papillae
Many microbial colonies on epithelial surface

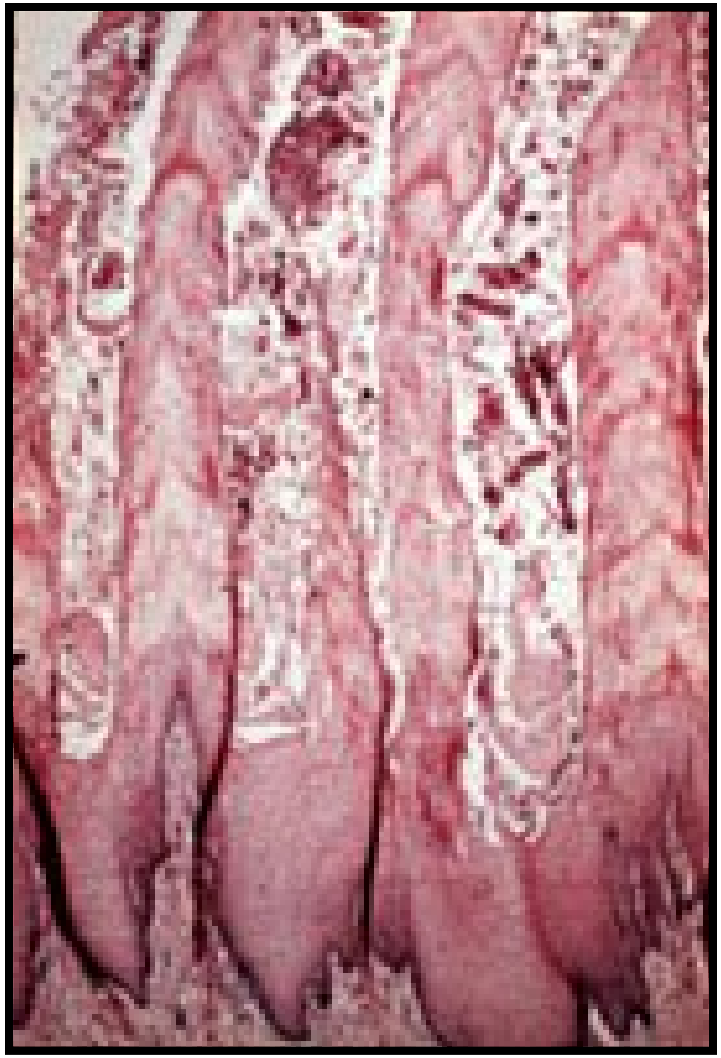
Differential diagnosis:

Hairy tongue

Hyperplastic candidiasis

Hyperkeratosis

Hyperplastic candidiasis



Main Pathologic Process: hyperkeratosis

Treatment: eliminating predisposing factors (tobacco, antibiotics, mouthwash, etc.) and/or brushing the tongue with a medium or heavy brush

Prognosis: benign condition but aesthetic appearance may be a concern

Filiform Papillae Status	
Geogrophic Tongue	Desquamate
Median Rhomboidal Glossitis	Atrophy (Absence)
Hairy Tongue	Hypertrophy

LINGUAL VARICES

A varix is a dilated , torturous vein, which is often subjected to increased hydrostatic pressure but is poorly supported by the surrounding tissue

Site: ventral surface of tongue
Floor of mouth.

Lingual Thyroid Nodule

Accessory accumulation of functional thyroid gland with in the body of the tongue is called lingual thyroid nodule
Appearance: nodular exophytic mass

Sex: females more

Site: mid posterior dorsum of the tongue

Size: 2-3 cm

Symptoms: Dysphonia, Dysphagia, Dyspnea

LYMPHOID TISSUE

- REACTIVE LYMPHOID AGGREGATE
- LYMHOID HAMARTOMA
- ANGIOLYMPHOID HYPERPLASIA WITH EOSINOPHILS
- LYMPHOEPITHELIAL CYST

Reactive

•Lymphoid tissue distribution: circular arrangement:

Waldeyers Ring

Palatine tonsils

Pharyngeal tonsils

Lingual tonsils

•Intra oral locations: buccal mucosa, soft palate, floor of mouth, gingiva

•When inflamed they produce a swelling, erythema, pain or discomfort.

SALIVARY GLAND

- APLASIA
- HYPERPLASIA
- ATRESIA
- ABERRANCY
- STAFNES CYST

APLASIA OF SALIVARY GLAND

Congenital absence of the salivary glands both major and minor salivary gland due to complete failure of their development or genesis is called salivary gland aplasia.

C/F:

•Unilateral / bilateral

•Xerostomia (dryness of mouth): difficulty in taking food & they have also increased incidence of caries, resulting in early tooth loss.

•Oral mucosa: appear dry, smooth and areas of food accumulation.

•Cracking of the lips & fissuring at the angle of the mouth are commonly seen.

Tt

Patient with congenital salivary gland aplasia will require continues dental supervision & administration of systemic & tropical fluorides to prevent caries.

HYPOPLASIA OF SALIVARY GLAND

Relative underdevelopment of the salivary gland is known as **Salivary gland hypoplasia**

Etiology:

Due to congenital absence or
Atrophy of gland due to lack of neuromuscular stimulation.
Salivary Gland Hypoplasia is often associated with
Melkersson-Rosenthal syndrome

C/F:

Same as salivary gland aplasia but in less severe form

ECTOPIC

The occurrence of normal salivary gland tissue in anatomically unusual locations is known as **Salivary gland ectopia.**

Ectopic salivary gland tissue may be found in the gingiva& these produce a tumor like mass, which is known as gingival salivary gland **Choristoma.**

The ectopic salivary glands despite of various locations intraoral/ extraoral, always histologically exhibit normal salivary gland lobules & ducts.

ATRESIA

- Atresia of the salivary gland excretory ducts refers to congenital absence or narrowing of the duct system.

- Extremely rare condition which may produce severe xerostomia.

ACCESSORY DUCTS

•Accessory salivary ducts are relatively common developmental malformations, which can occur in relation to any gland, though it is seen more often in association with the parotids.

•The accessory parotid duct is found usually above or below the normal Stenson's duct.

•Accessory ducts of the salivary glands most often remain undetected since their presence does not produce any clinical effect in mouth.

DIVERTICULI

•Refers to small pouches or out pocketing of the ductal system of the major salivary glands. It is also predominantly found in relation to the parotid.

•Diverticuli may produce recurrent swellings and acute sialadenitis due to retention of the saliva in those areas where the pouches are present along the course of the duct.

•Diverticuli are diagnosed by sialogram.

LINGUAL MANDIBULAR SALIVARY GLAND DEPRESSION:

Stafnes bone cyst/ defect,
Static bone cyst or latent bone cyst.

It's a developmental concavity in the lingual cortex of the mandible.

C/F:

Completely asymptomatic
Almost seen exclusively in males.
Usually lower 3rd molar area.

Differential diagnosis:

•Hemorrhagic bone cyst, this is almost always lies above the Mandibular canal while the lingual Mandibular salivary gland depression lies below the canal.

•Sialography reveals the concavities in the mandible are usually occupied by accessory lateral lobe of the submandibular salivary gland.

Thank you…..!!!

MELKERSSON-ROSENTHAL SYNDROME